DETAILED ACTION

1. Applicant's response filed on June 16, 2011 has been fully considered. Claims 1-24 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 7-10, 12, 16, 18-20, and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Joshi et al. (U.S. Patent No. 7,881,296 B2), hereinafter "Joshi".

Referring to claim 1:

Joshi teaches:

A method of providing physical port security in a digital communication system, comprising:

receiving a frame of digital data at a network device (see col. 3, line 66 to col. 4, line 3 'A data packet is received', Joshi);

generating a destination port bit map based on the destination address information contained in said frame of digital data (see col. 3, line 66 to col. 4, line 3 'A data packet is received by a layer 2 switch 42 which generates a forwarding map [i.e., generating a destination port bit map] for the data packet 48. The destination address

[i.e., based on the destination address] on the data packet is matched with a physical address or port number on the layer 2 switch by looking to an address table 46.', Joshi);

generating a physical port security bit map of allowed destination ports, wherein said physical port security bit map is generated based on one or both of information in said received frame of digital data and/or port security information associated with said network device (see col. 3, lines 30-33 'the global mask 18 [i.e. generating a physical port security bit map of allowed destination ports], on the layer 2 switch 12 may edit the forwarding feature of the data packet 10 depending on whether the ingress or source port 22 is a protected port or non-protected port.', Joshi);

comparing, using at least one logical operation, said destination port bit map with said physical port security bit map to generate a bit map of allowed destination ports (see col. 3, lines 33-36 'The global mask 18 acts as an editor to change the forwarding features of the data packet 10 by modifying/changing the port numbers on the forwarding map [i.e., generate a bit map of allowed destination ports].', Joshi); and

forwarding said frame of digital data to one or more of said allowed destination (see col. 3, lines 45-47 'Once the data packet 10 is sent to all ports as directed [i.e. forwarding said frame] by the forwarding map 14, it may then be directed to an uplink 28 and onto a router or a network 30', Joshi).

Referring to claims 7, 18:

Joshi teaches the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). Joshi further discloses the router (see col. 1, line 14 'switches'; and col. 3, line 47 'router', Joshi).

Referring to claims 8, 19:

Joshi teaches the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). Joshi further discloses that the data frame of digital data is received by a network server, such as a file server (see col. 3, lines 17-19 'to a server', Joshi).

Referring to claim 9, 20:

Joshi teaches the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). Joshi further discloses the local area network (see col. 1, line 53 'local area network', Joshi).

Referring to claim 10:

Joshi teaches the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). Joshi further discloses the process (see col. 2, line 67 'process', Joshi).

Referring to claim 12:

Joshi teaches:

A system for providing physical port security, comprising:

at least one processor within a network device, said network device having a communications port for receiving digital data from a digital communications system and two or more physical data ports for forwarding said digital data, said at least one of processor enables (see col. 3, line 18 'station', Joshi):

generation of a destination port bit map based on destination address information contained in said received digital data (see col. 3, line 66 to col. 4, line 3 'A data packet is received by a layer 2 switch 42 which generates a forwarding map [i.e., generating a destination port bit map] for the data packet 48. The destination address [i.e., based on the destination address] on the data packet is matched with a physical address or port number on the layer 2 switch by looking to an address table 46.', Joshi);

generation of a physical port security bit map of allowed destination ports, wherein said physical port security bit map is generated based on one or both of information in said received frame of digital data and/or port security information associated with said network device (see col. 3, lines 30-33 'the global mask 18 [i.e. generating a physical port security bit map of allowed destination ports], on the layer 2 switch 12 may edit the forwarding feature of the data packet 10 depending on whether the ingress or source port 22 is a protected port or non-protected port.', Joshi);

comparing, using at least one logical operation, of said destination port bit map with said physical port security bit map to generate a bit map of allowed destination ports (see col. 3, lines 33-36 'The global mask 18 acts as an editor to change the

forwarding features of the data packet 10 by modifying/changing the port numbers on the forwarding map [i.e., generate a bit map of allowed destination ports].', Joshi); and

forwarding of said digital data to one or more of said allowed destination ports (see col. 3, lines 45-47 'Once the data packet 10 is sent to all ports as directed [i.e. forwarding said frame] by the forwarding map 14, it may then be directed to an uplink 28 and onto a router or a network 30', Joshi).

Referring to claim 16:

Joshi teaches the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). Joshi further discloses the table (see col. 2, line 11 'table', Joshi).

Referring to claim 24:

Joshi teaches the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). Joshi discloses the physical port security bit map (see col. 3, lines 30-33 'the global mask 18', Joshi). Joshi further discloses dynamically altering (see col. 3, lines 35 'modifying/changing the port number', Joshi).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2-6, 11, 13-15, 17, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joshi et al. (U.S. Patent No. 7,881,296 B2), in view of Cheng et al. (U.S. Patent No. 7,274,694 B1), hereinafter 'Cheng".

Referring to claims 2, 13:

i. Joshi teaches the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). However, Joshi does not explicitly disclose that the comparing operation is a logical AND operation.

ii. On the other hand, Cheng teaches a cross stack port aggregation method associating a destination index with a receive packet, wherein Cheng discloses the logical AND operation (see fig. 4, 24 'AND gate', Cheng).

iii. The ordinary skilled person would have been motivated to have applied the teaching of Cheng into the system of Joshi to use the logical AND operation, because Joshi discloses the port bit map in "A data packet is received by a layer 2 switch 42 which generates a forwarding map [i.e., generating a destination port bit map] for the data packet 48." (see col. 3, line 66 to col. 4, line 3, Joshi). It's well known in the art the logical operations, such AND operation, are efficient to process bit maps.

Referring to claims 3, 14:

Joshi and Cheng teach the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). They further disclose the source address (see col. 2, lines 13-16 'source address', Cheng).

Referring to claims 4, 15:

Joshi and Cheng teach the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). They further disclose the destination address (see col. 2, lines 13-16 'destination address', Cheng).

Referring to claim 5:

Joshi and Cheng teach the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). They further disclose the combination of the source and destination addresses (see col. 2, lines 13-16 'combination of these addresses', Cheng).

Referring to claims 6, 17:

Joshi and Cheng teach the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). They further disclose the IP address information (see col. 2, lines 13-16 'IP destination address, or the IP source address', Cheng)

Referring to claim 11:

Joshi and Cheng teach the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). They further disclose said physical port security bit map is dynamically generated based on a variable parameter (see col. 3, lines 30-33 'the global mask 18 [i.e. dynamically generating a physical port security bit map], on the layer 2 switch 12 may edit the forwarding feature of the data packet 10 depending on whether the ingress or source port 22 is a protected port or non-protected port [i.e., based on a variable parameter].', Joshi. See also col. 2, lines 13-16 'In another embodiment of the invention, each port included in a link aggregation group has a unique port mask [i.e. dynamically generating a physical port security bit map] assigned to it", Cheng).

Referring to claim 21:

Joshi and Cheng teach the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). They further disclose the IP data (see col. 5, line 12 'IP addresses, included in the packet', Cheng).

Referring to claim 22:

Joshi and Cheng teach the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). They disclose generation of a physical port security bit map of allowed destination ports, wherein said physical port security bit map is generated based on one or both of information in said received frame of digital data and/or port security information associated with said network device (see col. 3, lines 30-33 'the global mask 18 [i.e. generating a physical port security bit map of allowed destination ports], on the layer 2 switch 12 may edit the forwarding feature of the data packet 10 depending on whether

the ingress or source port 22 is a protected port or non-protected port.', Joshi). They further discloses the source address (see col. 2, lines 13-16 'source address', Cheng).

Referring to claim 23:

Joshi and Cheng teach the claimed subject matter: a method of providing physical port security in a digital communication system (see claim 1 above). They further disclose the received digital data (see col. 5, line 12 'IP addresses, included in the packet', Cheng)

Response to Arguments

6. Applicant's arguments, filed on June 16, 2011, have been fully considered but are moot in view of the new ground(s) of rejection in view of Joshi and Cheng.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Pan whose telephone number is 571-272-5987.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached at 571-272-4006. The fax and phone numbers for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

/Joseph Pan/
Examiner, Art Unit 2492

August 24, 2011

/saleh najjar/

Supervisory Patent Examiner, Art Unit 2492